



A Cross-Sectional Study of Internet Addiction amongst Undergraduate Students of Medical Institute of Vadodara City

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ABSTRACT

Introduction: Internet has become an epitome of modern life, being used in every aspect of life. Many research found that overuse online things can be at risk for problematic Internet use. This type of addictive behaviour is not entirely suitable for future doctors who apart from good clinician, role models for many. So, current study was aimed to know the prevalence of internet addiction and associated factors among medical students.

Methods: All the students of 2nd year MBBS course were taken as study participants for this cross-sectional study design. Internet addiction information was obtained using 20 - item questionnaire tool developed by Dr. Kimberly Young along with pre-designed proforma to collect details of internet addiction in regards of amount spend, modes of access and time spend on internet. Descriptive statistics was used to analyse the data.

Results: Almost two third (74.82%) of students were possible addicts. None of students was categorised in less than average internet usage. Qualitative analysis found addiction of social networking sites and media download, instead of use of internet for academic purposes.

Conclusion: Unquestionably internet addiction is an emerging public health problem among medical students needs to be addressed.

Key words: Internet addiction, Medical students, Mobile phones, Social networking

INTRODUCTION

Technological progresses and discovery of laptops, desktops and mobile phones, have transformed our way of working. India comes up with front position in cyber world with information technology industries emerging into large service providers. All the gadgets already has become an essential part of our life.¹ Before the technological devices were in nearly every home, students used to play outside for entertainment. Now a day, this carefree joy has been replaced by key board and touch screen controller.² More worst situation is created

with easy to access internet facility and social networking.³

With the advancement information technologies, the internet turn out to be easy to get tool for communication, knowledge sharing and becomes a virtual treasures trove of information.⁴ But what is the big picture?

Internet addiction becomes significant behavioural problem in excess of normal expectancy that clearly fit to the definition of pandemic need to be tackled.⁵ Internet traps the individual, make them social outcast and habitual them with the usage along with compel individual to succumb to the

“Internet Addiction Disorders (IAD)”⁶. Internet addicted people need to spend a huge amount of time on internet - most of times to search the things which is totally unrelated to his or her daily activities - to the point where other precious things of life including all the dimensions of health; physical, social, mental and spiritual are allowed to suffer⁷. Novel research that was linked to internet savvy presented at the annual conference of the Radiological Society of North America in Chicago revealed that excessive use of gadgets demonstrated disproportionately rise of neurotransmitter that inhibits brain activity.⁸

Medical students need the internet more often compared to other people due to their informational, educational or research needs. This need becomes habit over a time because of easily available information through various web search engines. Positive habits also in favour of good health, but problems create when this habits turns in to addiction of “internet trap” without knowing their knowledge. It is the age, where all positive and negative habits take place in someone’s life, which remains long through the entire life.

Being medical students, this kind of addictive behaviour problem is not accepted at all, because it is the profession where you have to behave differently from others, obviously in healthy way. So looking at future doctor, patient direct or indirect ways indulge in healthy lifestyle. Therefore the study was planned to certain prevalence of internet addiction among medical students.

MATERIAL AND METHODOLOGY

This was a cross-sectional study done among the medical students of Smt. B. K. Shah Medical Institute and Research Centre. The study was done with the use of 20 - item questionnaire tool developed by Dr. Kimberly Young which was a pre-defined and pre-tested questionnaire tool for internet addiction test⁹ along with proforma which was developed by researchers, which include information of associated factors related to internet. For in-depth information of internet addiction a small extent (two questions) of qualitative component was also added in the proforma.

Dr. Kimberly Young questionnaire consists of 20 items that measures average, possible addict and addict level of Internet use. Answers of each question recorded in scale measure to begin with - 0: Does not apply, 1: Rarely, 2: Occasionally, 3: Frequently, 4: Often and 5: Always. Total up the scores for each item was done at last and students were categorised according to score as under:

0 - 19 points: Less than average on-line user

20 - 49 points: Average on-line user

50 - 79 points: Possible addict

80 - 100 points: Addict

An entire student of 2nd MBBS students was taken as study participants. So, total 139 students were enrolled in to the study. For qualitative component, it was decided purposively to interview 25% of total study participants, so 35 students were interviewed randomly. Students were well informed regarding the benefits of study and participation from students was done on volunteer basis with informed consent taken prior.

The study was allowed to conduct by Human Research Review Panel (HRRP) committee of Sumandeep Vidyapeeth. Students were asked to come on a particular day in morning hours; a questionnaire tool was given to each individual and asks them to mark the response that suitable to your personal behaviour. Students who were present that day and who use any form of internet (either on mobile, laptop or any other form) only included in to the study.

Statistical analysis:

Medical Students’ response from the questionnaire tool was recorded in to the Microsoft Excel Sheet. The data converted in to the information with the use of Epi-info 7. Descriptive statistics and percentage were used to state frequency of mild, moderate, and severe levels of internet addiction. Qualitative component of study was analysed with word cloud after preparing script of utter sentences.

RESULTS

The study was done among the medical students (2nd year) of SBKS Medical Institute and Research Centre. A total data of 139 medical students was retrieved through standardise questionnaire. Among the study participants, 81 (58.28%) were male and 58 (41.72%) were female. The mean age of participants 19.4 years and all the study participants belonged to socio-economically upper class family as per Modified BG Prasad socioeconomic scale.

It can be seen from table 1, majority of study participants (74.82%) were possible internet addict while 23 (16.55%) study participants were fit to category of severe internet addiction. Twelve study participants (8.63%) were mild internet addict or belonged to average on-line user category. Average on-line users were more common among female participants (12.07%) compared to male participants (6.17%). None of the study participants belonged to category of less than average users.

Internet access was commonly done through mobile phones (69.78%). Majority (61.15%) of participants' was enjoying internet access in < 300 Indian rupees per month.

Table 1: IAT score distribution gender wise

Score	Interpretation	Males (n =81) (%)	Females (n=58) (%)	Total (%)
0-19	Less than average	0 (0)	0 (0)	0 (0)
20-49	Average on-line user	5 (6.17)	7 (12.07)	12 (8.63)
50-79	Possible addict	62 (76.54)	42 (72.41)	104 (74.82)
80-100	Addict	14 (17.28)	9 (15.52)	23 (16.55)
Total		81	81 (100)	58 (100)

Table 2: Various factors associated with internet addiction.

Variables	Study Participants (n=139)		Total (n=139) (%)
	Males (n=81) (%)	Females (n=58) (%)	
Access of internet through			
Desktop	7 (8.64)	2 (3.45)	9 (6.47)
Laptop	19 (23.46)	11 (18.97)	30 (21.58)
Mobiles	52 (64.2)	45 (77.59)	97 (69.78)
Tablet	1 (1.23)	2 (3.45)	3 (2.16)
Expenditure on Internet per month (INR)			
< 300	45 (55.56)	40 (68.97)	85 (61.15)
300 - 600	14 (17.28)	11 (18.97)	25 (17.99)
> 600	22 (27.16)	7 (12.07)	29 (20.86)
Modes of Internet access			
Wi-Fi	25 (30.86)	5 (8.62)	30 (21.58)
Broadband	18 (22.22)	9 (15.52)	27 (19.42)
Cellular	24 (29.63)	36 (62.07)	60 (43.17)
Dongle use with data card	14 (17.28)	8 (13.79)	22 (15.83)
Duration spend on internet (in hours)			
1 to 3	55 (67.9)	41 (70.69)	96 (69.06)
4 to 6	22 (27.16)	16 (27.59)	38 (27.34)
7 to 9	3 (3.7)	1 (1.72)	4 (2.88)
more than 9	1 (1.23)	0 (0)	1 (0.72)

Table 3: Qualitative analysis of internet addiction (n=35)

Statement	Responses (n=35)(%)
Question 1: what are the purposes of your internet using?	
"most commonly we use internet for social networking, academic purpose, gaming and media file download"	11 (31.43)
"we are using internet for video calling and social networking"	10 (28.57)
"use of internet for academic purpose, social networking and audio and media file downloading"	14 (40)
Question 2: can you able to explain reasons of internet addiction?	
"Easily availability and less cost of internet increases addiction"	17 (48.57)
"increasing gadgets"	14 (40)

Most common modes of access was through mobile phones (43.17%). Majority of students spend 1 to 3 hours per day on internet.

Qualitative component of analysis shows that, majority of study participants (40%) use internet for academic purpose, social networking and to download media files. Near half of study participants believed easily availability with less cost was responsible for up rise in internet addiction.

DISCUSSION

Technological advance, especially social networking applications, has changed way of communica-

tions and interactions between individuals¹⁰. Internet usage has positive and negative impacts depend on what are you looking for. No doubt positive impacts are heavier of internet, but we cannot exclude internet affects all the dimensions of health; physical, social and mental wellbeing, and those things also identified in many literatures.^{10,11}

When you are a doctor or being a doctor, it's your duty to behave such way that preserve and promote health of your patients by looking at you. Negative behaviour is such a communicable that is accepted easily by its observer. Apart from many addictions or behaviour problems like smoking and alcohol, internet addiction is emerging as new

lifestyle problems. So, primordial prevention can only be done if we know the current situation of internet addiction and so current study was executed owing to availability of less literature.

In our study, prevalence of internet addiction was found 16.55%, which was quiet higher than previous study done by Shrijampana et al¹² (0.4%) and Goel et al¹³. Comparable both the studies were done in the year of 2013 and 2014, after the 2016 the rate (amount spend) of internet quiet decreased and upsurge in mobile gadgets can be responsible for increase in prevalence of internet addiction. Another important finding in current study, none of using below average internet (score of IAT between 0-19), so it can be seen that internet become unseparated part of life among students, that can be able to indulge the students in to behaviour problems over the times. In 2014 one study reported, 23.2% of medical students were below average users of internet.

Online available previous literature suggested that internet addiction was more common among males,^{12,14,15} which was in concurrence in our study as well.

Results of many previous studies reported that mobile was the most common form of internet access, majority of spend < 300 rupees per month on internet with spend of time 1 to 3 hours per day on internet^{12,13,16}. Findings of current study is in concurrence of previous studies that most common modes of access was through mobile phones (43.17%) and majority of medical students spend 1 to 3 hours per day on internet (69.06%).

It can be seen from qualitative analysis using word cloud, that most common use of internet is for social networking and media download rather than academics. This finding was with the agreement of study done by Shrijampana et al¹², in which most common purpose of internet usage was social network (59.7%) and media download (18.9%).

The current study was done in only one medical college and that is also private medical institute, so we cannot assure generalised applicability of findings to entire medical student's fraternity. Rather, we suggest same type of study with increasing sample size and incorporating both government and private institute.

CONCLUSION

There are very few studies which showing prevalence of internet addiction among medical students of private medical colleges. Results of our study can be helpful to reach for summative conclusion for other researcher to develop preventive strategies. Nearly two third of the medical students of

current study is in trap of possible internet addiction. We can conclude that internet addiction is an emerging public health problem. The limitations of the study is its sample size and study area as this study incorporated only one medical college and that is also private medical institute, so we cannot assure generalised applicability of findings to entire medical student's fraternity. Rather, we suggest same type of study with increasing sample size and incorporating both government and private institute. The need of the hour is to make public health policies which focus on preventive aspects of this behaviour addiction, and conduct further research to overcome limitation of this study.

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